

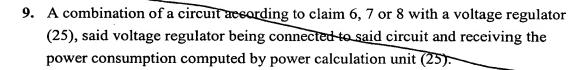
CLAIMS

- 1. A process for regulating voltage applied by a voltage regulator (27) to an integrated circuit (13), comprising the steps of:
- measuring instantaneous power consumption inside of the integrated circuit;
 and
 - regulating said voltage according to the measured instantaneous power.
 - 2. The process of claim 1, wherein the integrated circuit comprises at least two units (14, 16, 18 20, 22) and wherein the step of measuring comprises:
- sensing power consumption in at least two of said units, and
 - computing instantaneous power consumption inside of the integrated circuit according to the sensed power consumption in said units.
 - 3. The process of claim 2, wherein the step of sensing power consumption in a unit comprises detecting state changes in signals output by said unit.
 - 4. The process of claim 2 or 3, wherein the step of computing comprises:
 - weighting the power consumption sensed in said units; and
 - adding the weighted power consumption of said units.
 - 5. The process of one of claims 1 to 4, wherein said step of regulating comprises:
 - computing the derivative with respect to time of the measured instantaneous power, and
 - regulating said voltage according to said computed derivative.
 - 6. An integrated circuit (13) comprising at least one unit (14, 16, 18 20, 22) provided with a sensor (15, 17, 19, 21, 23) for measuring power consumption and a power calculation unit (25) for receiving the power consumption measured by each of said sensors and computing a power consumption for the circuit.
 - 7. The circuit of claim 6, wherein said power calculation unit computes power consumption for the circuit by weighting the power consumption measured by each of said sensors with weights; and by adding the weighted power consumption, and wherein the weights are stored in said integrated circuits.
 - 8. The circuit of claim 6 or 7, wherein said sensor (15, 17, 19, 21, 23) detects state change in signals output by said unit.

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